This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously cancelled) An essentially purified and isolated noggin polypeptide having an amino acid sequence as set forth in Figure 1 (Sequence I.D. No. 2) or a functionally equivalent amino acid sequence.

2. (Previously cancelled) The human noggin polypeptide as claimed in claim 1 encoded by the DNA of hnogl-9 (deposited with the American Type Culture Collection under Accession No. 75310) or hnogl-10 (deposited with the American Type Culture Collection under Accession No. 75308) and fragments and derivatives thereof exhibiting noggin activity.

3. (Previously cancelled) An isolated nucleic acid selected from a nucleic acid encoding a noggin polypeptide as claimed in claim 1 or 2 and substantially similar nucleotide sequences.

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4. (Previously cancelled) A nucleic acid as claimed in claim 3 which hybridizes to at least one nucleotide probe selected from the sequence of nucleotides 2 to 262 of Sequence I.D. No. 10 and the sequence:

5′ GARGGIATGGTITGYAARCC (SEQ ID NO. 22).

5. (Previously cancelled) A nucleic acid as claimed in claim 3, wherein said nucleic acid is isolated from a l human placental genomic library.

6. (Previously cancelled) A nucleic acid as claimed in claim 5, wherein said nucleic acid is isolated from a phage selected from hnogl-9 (AT 75310) or hnogl-10 (ATCC 75308).

7. (Previously cancelled) A substantially purified nucleic acid as claimed in claim 3, encoding the human noggin polypeptide corresponding to Sequence I.D. No. 2.

8. (Previously cancelled) A mutated variant of a nucleic acid as claimed in claim 3, which encodes a noggin agonist or antagonist.

9. (Previously cancelled) A mutant noggin polypeptide which is a noggin agonist or antagonist obtainable by expression of a nucleic acid as claimed in claim 8.

10. (Previously cancelled) An isolated nucleic acid which contains a nucleotide coding sequence for a noggin polypeptide as claimed in claim 1, in the anti-sense direction.

11. (Previously cancelled) A phage selected from the group consisting of hnogl-9 as deposited with the American Type Culture Collection and assigned Accession Number 75310 and hnogl-10 as deposited with the American Type Culture Collection and assigned Accession Number 75308.

12. (Previously cancelled) An expression vector comprising expression regulatory sequences operably linked to a nucleotide sequence which encodes noggin, wherein said nucleotide sequence is selected from the group consisting of:

a) a nucleotide sequence which encodes the amino acid sequence set forth in Fig. 1 (SEQ I.D. NO. 2), and

b) sequences which hybridize to the sequence of (a) and encode a protein which promotes the induction of neural tissue.

13. (Previously cancelled) An expression vector as claimed in claim 12, capable of directing expression of a functional noggin polypeptide in a eukaryotic host cell.

14. (Previously cancelled) An expression vector as claimed in claim 13, wherein said host cell is selected from the group consisting of COS cells and CHO cells.

15. (Previously cancelled) An expression vector as claimed in claim 12, capable of directing the expression of a functional noggin polypeptide in a prokaryotic host.

16. (Previously cancelled) The expression vector as claimed in claim 15, wherein said host is E. coli.

17. (Previously cancelled) An expression vector as claimed in claim 12, capable of directing the expression of a functional noggin polypeptide in a baculovirus host.

18. (Previously cancelled) Host cells transformed by an expression vector as claimed in claim 12.

19. (Previously cancelled) A method of producing a noggin polypeptide which comprises culturing transformed host cells as claimed in claim 18, under conditions suitable for expression of said polypeptide.

20. (Previously cancelled) A method as claimed in claim 19, wherein human noggin is produced in a form substantially free of proteins of non-human origin.

21. (Previously cancelled) A pharmaceutical composition comprising a therapeutically effective amount of a polypeptide as claimed in claim 1, together with a pharmaceutically acceptable carrier.

22. (Previously cancelled) A culture medium suitable for use in culturing nerve cells containing a noggin polypeptide as claimed in claim 1.

23. (Previously cancelled) An isolated receptor which in vivo binds a noggin polypeptide as claimed in claim 1, or a fragment thereof retaining the binding site for said polypeptide.

24. (Previously cancelled) An antibody which binds one or more noggin polypeptides as claimed in claim 1, but not other growth factors.

25. (Previously cancelled) A hybridoma capable of producing a monoclonal antibody as claimed in claim 24.

26. (Previously cancelled) The monoclonal antibody obtainable from hybridoma RP57-16.

27. (Previously cancelled) Hybridoma RP57-16.

28. (Previously cancelled) A hybridization probe suitable for detecting a nucleic acid as claimed in claim 3 having the sequence:

5'GAR GGIATGGTITGYAARCC (SEQ I.D. NO. 22).

29. (Previously cancelled) A noggin polypeptide as claimed in claim 1, for use in a method of treatment of a human or animal.

30. (Previously cancelled) A method of treatment of a human or animal comprising administering a therapeutic dosage of a noggin polypeptide as claimed in claim 1, wherein said treatment is selected from the group consisting of regulation of cartilage and bone growth, therapy of a congenital condition or degenerative disorder of the nervous system, and treatment of damaged nerve cells.

31. (Cancelled) A phage selected from hnogλ-9 as deposited with the American Type Culture Collection and assigned Accession Number 75310; hnogλ-10 as deposited with the American Type Culture Collection and assigned Accession Number 75308.--

32. (Cancelled) A culture medium suitable for use in culturing nerve cells containing a noggin polypeptide as set forth in Figure 1 (SEQ ID NO: 2).--

33. (Cancelled) An isolated receptor which in vivo binds a noggin polypeptide as set forth in Figure 1 (SEQ ID NO: 2) or a fragment thereof retaining the binding site for the polypeptide.--

34. (Cancelled) A hybridization probe suitable for detecting a nucleic acid as set forth in Figure 1 (SEQ ID NO: 1), the hybridization probe having the sequence:

5'GAR GGIATGGTITGYAARCC (SEQ ID NO: 22).--

35. (Cancelled) A method of treatment of a human or animal comprising administering a therapeutic dosage of a noggin polypeptide as set forth in Figure 1 (SEQ ID NO: 2), wherein the treatment is selected from the group consisting of regulation of cartilage and bone growth, therapy of a congenital condition or degenerative disorder of the nervous system, and treatment of damaged nerve cells.--

36. (Previously added) A method of regulating cartilage or bone growth comprising administering an effective amount of noggin polypeptide as set forth in Figure 1 (SEQ ID NO: 2).